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A Supply-Side View of Suicide Terrorism: A Cross-National Study

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The recent literature on the root causes of suicide terrorism yields several testable hypotheses, most notably that suicide attacks are a strategic response by terrorist groups confronting foreign occupation by democratic states. This study does not find empirical support for this and other common hypotheses and instead demonstrates that suicide terrorism is a product of political and organizational features of the terrorists themselves. While foreign occupation, religious diversity, and group typology do predict suicide attacks, democracies are not more likely to be targets of suicide terrorism. Terrorists, however, who are nationals of nondemocracies are significantly more likely to launch suicide attacks.

Suicide terrorism is a particularly lethal manifestation of political violence that has increased in frequency since the early 1980s (Atran 2004; Pape 2002), and social scientists have devoted a considerable amount of attention to explaining its root causes (see Smith 2004). Scholars of terrorism explain its more frequent use by terrorist groups by noting, quite simply, that suicide terrorist attacks work. Whereas a previous generation of scholars ascribed suicide attacks to the psychological pathologies of the individual attackers (Merari 1990; Post 1990), contemporary studies maintain that there is a "strategic logic" to suicide terrorism which makes it lucrative for terrorist groups to employ. Suicide attacks present groups with a tactical advantage when facing a better-armed adversary (Sprinzak 2000). Suicide terrorism is cheap to execute yet expensive to prevent, is remarkably successful in wreaking high levels of damage on targets, is an effective means to signal to the terrorist group's target audience its determination to win, and binds together terrorist group members and nonmilitant supporters (Hoffman and McCormick 2004). Finally suicide attacks are a response by terrorists to the "hardening of targets" that follows previous nonsuicide campaigns (Berman and Laitin 2006).

Yet, despite its effectiveness, suicide terrorism is not universally adopted by terrorist groups. While it has grown in frequency, suicide terrorism remains a rare manifestation of political violence practiced only by certain groups and deployed only in certain conflicts, and it is always used by groups alongside "conventional" nonsuicide attacks. According to data from the Terrorism Knowledge Database (www.tkb.org), suicide terrorist attacks account for only 2.16% of the total number of international terrorist attacks—attacks where the perpetrator and the victim are of different nationalities—and 3.36% of the total number of domestic terrorist attacks for the period 1968 to 2005. Furthermore, out of the 851 active terrorist groups during the same period, only 58 of them (6.82%) engaged in at least one suicide attack, and all 58 of these groups also engaged in nonsuicide attacks.

Scholars have speculated on a wide range of environmental[1] predictors of suicide terrorism: foreign occupation by democratic states (Pape 2003, 2005), poor economic development and low literacy levels (Gunaratna 2004; Khashan 2003; Pedhazur, Perliger, and Weinburg 2003), religious and cultural diversity (Berman and Laitin 2006), competition among terrorist groups (Bloom 2004a); the rise of Islamism (Atran 2004; Crenshaw 2002; Gambetta 2006; Sageman 2004), and a complicated, multifactoral set of motivations that are interrelated with the behaviors and reactions of the target (Brym and Araj 2006). This study contributes to the literature by empirically testing commonly ascribed predictors of suicide terrorism, considering new range predictors that address the political context and organizational

[1]Here I use Moghadam's (2005) distinction between "first level" (individual or psychological), "second level" (organizational and group dynamic), and "third level" (structural or environmental) approaches to the study of terrorism.

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features of suicide terrorism groups themselves (the "supply-side" of the equation), and differentiating suicide from nonsuicide terrorism.

The results of this paper contradict some of the conventional wisdom about suicide terrorism by correcting for two types of selection bias prevalent in previous studies (see Geddes 1990). First, studies of suicide terrorism have traditionally been qualitative examinations that use a fairly narrow descriptive or comparative scope (Moghadam 2006, 707). These studies undoubtedly have made important contributions by generating some testable hypotheses, but fail to ensure the external validity of their findings.

Second, with the exception of Berman and Laitin (2006) and Pedhazur, Weinberg, and Perliger (2003), none of the cross-national studies consider the root causes of suicide terrorism while differentiating the causes of nonsuicide terrorism or terrorism as a whole. This is both a methodological and theoretical problem. Though Crenshaw (2002) explains that suicide terrorism shares some qualities with nonsuicide terrorism, and Bloom (2004a), Pape (2003), and Pedhazur, Perliger, and Weinburg (2003) note that all groups that engage in suicide attacks also engage in nonsuicide attacks as well, scholars do not consider the possibility that suicide terrorism is a wholly different phenomenon which might have different root causes.

This study corrects for these selection biases in creating and analyzing a database of 4,660 incidents of terrorism—*both* suicide and nonsuicide attacks—occurring in 88 countries, representing the full universe of terrorist attacks, from 1998 to 2005 inclusive. Using six statistical models, I evaluate the predictors most commonly linked by scholars to the causes of suicide terrorism. I scrutinize in particular the relationship between democratic governance, both as a feature of the political system of the targets of suicide attacks and as a feature of the political systems from which suicide attackers hail and are acculturated in. I also examine in detail the role foreign occupation plays in prompting suicide terrorism and assess whether or not terrorist groups defined by a goal of national liberation, separatism, or national self-determination are more likely to use suicide terrorism than other types of groups.

Democracy and Occupation

The idea that democracies are more frequently the targets of terrorism in general has been well established empirically (Abadie 2004; Eubank and Weinberg 2001; Li 2005; Schmid 1992). In his acclaimed 2005 and 2003 studies of suicide terrorism,[2] Robert A. Pape comes to a similar conclusion: suicide terrorism is a strategic response, usually employed by terrorist groups motivated by a goal of national self-determination, and is most often directed against democratic states engaged in occupations. Pape argues that democracies are prudent targets for suicide attackers. The publics of democracies are highly intolerant of costs imposed by suicide attacks while being empowered to affect the policy pursued by their respective governments. Democracies are also institutionally constrained in their ability to respond to suicide terrorist attacks due to legal structures restraining law enforcement. These same limits to executive power, which are not present in nondemocracies, afford suicide terrorists a better opportunity to plan and execute their attacks. Hoffman and McCormick (2004) echo Pape's conclusions noting that suicide terrorism, because it is particularly damaging and psychologically terrifying, is used by terrorist groups specifically to capture media attention, to communicate drive and determination, and also to deflect whatever public backlash might occur in the constituency that the group seeks to represent by demonstrating the "purity" of its purpose. Finally, democracies are characterized by media and press freedoms and have politicians and governments that are highly responsive to the concerns of citizens and are therefore more likely to enact policy changes in response to suicide attacks that terrify citizens.

These studies provide an important theory-building step in terms of explaining suicide terrorism, but they also raise some significant questions. These vulnerabilities would seem to make democracies more likely targets for *all* forms of terrorism, for the reasons detailed in the aforementioned empirical literature, not just suicide terrorism. Also, Bloom (2004a) questions whether Pape's definition of democracy—any state in which the executive is elected—is overly broad permitting him to classify Sri Lanka, Russia, and the Israeli administrative apparatus of the Palestinian Territories as democratic.

The other half of Pape's conclusion is that suicide attacks are much more likely to be deployed against democracies that are engaged in a territorial occupation. Pape argues that the use of modern suicide terrorism is somewhat analogous to state use of air power or economic sanctions. Its purpose is to coerce

[2]Pape's recent work has become the most discussed contribution in the field of terrorism studies. His 2003 article which appeared in *APSR* has been cited by no less than 109 other studies, while his 2005 book has been cited 34 times since the writing of this manuscript.

a target into making a policy change including the relinquishment of territory. However, suicide attacks usually prompt fierce retribution by the target and can undermine popular support amongst the terrorist group's constituent community. Therefore groups only deploy suicide attacks when they, and their constituents, are desperate, highly committed to the struggle, and perceive that they have no other viable alternate strategy. All of these conditions are created by foreign occupation.

However, Pape's argument that foreign occupation is a reliable predictor of suicide terrorism also raises questions. First, there are a multitude of examples of terrorist groups engaged in struggles against foreign occupation that *do not* use suicide attacks: the various factions of the Irish Republican Army; the Basque Separatist ETA movement; the Islamist/separatist Moro Islamic Liberation Front of the Philippines; and the Puerto Rican nationalist/separatist movement, El Macheteros. Second, suicide terrorism is not limited to groups engaged in struggles against occupation. Al-Qaeda and affiliated groups such as Abu Hafs al-Masri Brigade, which claimed responsibility for the deadly suicide attacks in the United Kingdom and Spain in 2004 and 2005, have used suicide terrorism against targets that cannot really be described as occupying forces. Though Pape argues that international Islamist groups like al-Qaeda are motivated by a desire to end the U.S. military presence in Saudi Arabia or protest against the Israeli occupation of the West Bank and Gaza, this is at best an incomplete profile of transnational Islamist terrorism. In a 2005 assessment, the U.S. Congressional Research Service concluded that suicide attacks by al-Qaeda and its affiliated groups were motivated by a wide array of issues including U.S. support for unpopular regimes such as Egypt and Saudi Arabia, the displacement of traditional Muslim culture by Western culture, and the goal of recreating an Islamic caliphate (U.S. Congressional Research Service 2005). Moghadam's (2006) critique of Pape provides greater dimension in noting that while foreign occupation may explain patterns of "traditional" or "localized" suicide attacks, it does not explain groups like al-Qaeda that are engaged in a "globalization of martyrdom" in the service of rather nebulous goals.

A Supply-Side View of Suicide Terrorism

This study injects a more balanced consideration of the two basic types of structural predictors of suicide terrorism: those that operationalize the qualities of the targets chosen by suicide terrorists and those that operationalize the political and organizational features and sociopolitical contexts of groups that engage in suicide terrorism. These two types of predictors—the "target-side" and "supply-side" views—are placed in the same analytical models permitting this study to produce a more comprehensive understanding of what causes suicide terrorism.

This more comprehensive consideration is required for two reasons. First, recent studies maintain that groups that use suicide attacks are rational actors and that their decision to use suicide attacks is the product of a strategic calculation. It necessarily follows that the organizational objectives and environmental contexts of a terrorist group would also predict whether or not it chooses to engage in suicide terrorism. For example, a terrorist group seeking to confront a democratic state that is occupying territory claimed by the group may opt not to use suicide attacks if it regards local and international legitimacy to be a strategic asset as well.[3] However, a terrorist group might opt to use a suicide attack against a nondemocratic state that supresses domestic media coverage in order to attract the attention of the international press, who would find a suicide attack more worthy of coverage than a conventional attack.[4] Second, it seems an oversight that only the regime type of the target be operationalized as a predictor of suicide attacks. Terrorism is a manifestation of political participation by nonstate actors and the polity within which terrorist groups operate may affect the behavior and strategic decisions. It might be the case, theoretically, that nondemocratic countries, because they restrict legitimate, nonviolent political participation, increase the optimality of more drastic behaviors like suicide terrorism to political actors. Also, nondemocracies are harder targets, censor news of terrorist attacks, and torture captured perpetrators of terrorist attacks. Domestic terrorists might be, therefore, more likely to launch drastic attacks to appeal to international media or eliminate the possibility that the perpetrator that can be captured, tortured, and turned into an informant.

[3]An example would be the Irish Republican Army, a terrorist organization that relies heavily on support from Catholic and generally conservative constituents who would likely view a suicide attack as illegitimate.

[4]An example would be the Kurdish Workers Party (PKK) of Turkey, an organization that engaged in suicide attacks in the 1990s partially in order to obtain international media coverage in the face of domestic media censorship by the Turkish military.

Hypotheses

To examine the supply-side of the equation, this study asks some new questions: Are democracies more or less likely to *produce* suicide terrorists, as opposed to being targeted by them? Are terrorist groups faced with foreign occupation and which possess a goal of national liberation or national self determination more likely to view suicide attacks as a more desirable tactic than conventional, nonsuicide attacks? I respond to these questions by advancing four hypotheses.

H1: Democracies are no more likely to be the targets of suicide terrorist attacks than nondemocracies.

There is not a unique relationship between democracy—or, rather, any regime type—and suicide terrorism that can be differentiated from the general relationship between democracy and all manifestations of terrorism. Terrorists using both suicide and nonsuicide tactics are theoretically more likely to attack democratic targets due to the opportunities afforded to them by democratic political systems.

H2: Democratic polities are less likely to produce terrorist groups that use suicide tactics.

There is a small, mostly qualitative literature that maintains that democratic societies are less likely to *produce*—be the native countries of perpetrators of—suicide terrorism while nondemocratic political systems may induce political actors to take extreme measures including suicide attacks. Authors argue that suicide terrorism is often undertaken by groups seeking the political support of audiences that are themselves highly desperate, frustrated, and hopeless in the face of intractable political circumstances or a repressive state (Harrison 2006; Merari 2004; Pedhazur, Perliger, and Weinburg 2003). Groups using suicide attacks expect that their tactics will resonate with their target audiences, providing them with a sense of empowerment in the face of powerlessness and humiliation (Bloom 2004a; Hassan 2004). Atran (2004) postulates that suicide terrorism is a result of rising political, and economic, aspirations in societies that lack liberal governments, and he blames suicide attacks against the United States on U.S. support for regimes that deny civil liberties or human rights to their citizens. Dingley (2004) observes that suicide terrorism is more common in societies that are "small and closed" and "dominated by tradition," while Ergil (2002) argues that the Kurdish Workers Party (PKK) resorted to suicide attacks partially in order to communicate to the international community the desperate situation of Kurds in Turkey and the lack of legal or conventional means of redress in that country. If democracies are able to reward political organizations with greater opportunities to pursue change through the legal means than would otherwise be obtained through political violence, rational actors will opt for legal means of political redress. Because dictatorships do not provide such space, nonstate actors opt for extralegal means and if desperate enough will engage in suicide terrorism.

H3: Foreign occupation is positively associated with the decision of groups to engage in suicide attacks, but this is independent of the regime type of the occupying state.

Occupation is likely to be a motivator for terrorist groups to engage in suicide attacks, but it does not necessarily follow that these attacks are likely to be directed towards only certain types of states. Occupation is a precipitant of suicide terrorist attacks due to a factor referred to by Mia Bloom (2004a) as "otherness." Terrorist groups are more apt to use suicide attacks against targets that their constituent population cannot identify with, and that includes foreign occupiers and members of different religious groups (Berman and Laitin 2006; Bloom 2004a).

These scholars borrow from Kaufman's (1996, 1998) argument that interethnic conflicts tend to produce higher civilian casualties and feature more atrocities committed against civilians because combatants fully dehumanize their enemies, refuse to recognize the boundaries between civilians and military, are concerned with immediate territorial or political objectives and are relieved of the need for approval from their constituent communities. Suicide attacks are, all things being equal, disapproved of by the public. However, this is highly dependent on the public's capacity to associate with the target. Where suicide terrorism has been adopted by groups and has been met with approval by the constituent audience of the terrorist group, for example Palestinians living in the West Bank and Gaza facing occupation by non-Muslim military forces, it has been directed against targets that are of a different culture and religion. When groups have attempted to use suicide attacks against coreligionists—Mia Bloom (2002a) uses the case of al-Qaeda suicide attacks that indiscriminately killed fellow Muslims in Saudi Arabia, Jordan, and Turkey in 2003—they have suffered losses in public support. Suicide attacks, because they are launched by groups that seek to bolster public support of a constituent population whom they claim to represent and may even rely on

for material support or political cover, are most often perpetrated against individuals who do not share the attackers' religious or national identity.

H4: Suicide terrorism is more likely to be undertaken by groups with "universal" or "abstract" political objectives rather than by groups with discrete and concrete strategic objectives such as domestic regime change, policy change or national liberation or self-determination.

Suicide terrorism is a tactic that is useful for only certain types of terrorist movements. Such attacks are risky because they are particularly damaging and often entail significant civilian and bystander casualties[5] and therefore continually threaten to undermine the support of constituent populations. Movements that use terrorism to promote domestic political change aim to "win the hearts and minds" of their fellow countrymen (Bloom 2004a) and will most often find suicide attacks to be too risky. Suicide terrorism is "beyond the pale" because it is directed at targets that the public can identify with, their fellow nationals. Furthermore, groups whose policy objective is to replace the current government with a "more legitimate" one must demonstrate their own legitimacy and competence as an alternative to the status quo. For these types of groups, suicide attacks might hinder efforts to undermine popular support for the regime targeted and draw people to their cause.

It is theoretically possible that suicide attacks are more common among movements that have national liberation, self-determination, or separatist goals but this will largely depend on the nature of the conflict—whether or not it is past its "first generation" (see Crenshaw 1990)—or on the nature of the target—whether or not it is a population that is religiously and culturally different from the perpetrators. However, it is more probable that suicide terrorism is a distinctive feature of groups motivated by what I term universalistic or abstract political objectives. Appendix 3, located in the Web Appendices, provides some preliminary empirical support for this contention in noting the rate of suicide terrorist attacks by the goal type of the group (National Self-Determination, Domestic Political and Universal/Abstract).

[5]The mean number of victims (persons injured or killed) in all terrorist attacks in the database used for the empirical analysis of this study is 9.7 per attack. The mean number of victims for suicide attacks is 78.8.

This contention is further supported by studies by Hoffman and McCormick (2004) who argue that suicide terrorism is a type of "signaling" undertaken by terrorist groups; a process by which groups use suicide attacks as a means to communicate their level of commitment to the struggle with their opponents, with their constituents and with the world at-large. Suicide attacks are a means to impress upon target states and populations the high costs the group can impose if their demands are not met while expressing to individuals on whose behalf the groups claim to fight the intensity and "purity" of their struggle and the determination of their organization. Suicide attacks, Hoffman and McCormick observe, also attract a significant amount of media and popular attention, and these are craved by groups that have a broad message that they want to transmit to a very large audience, often in lieu of painstakingly building a mass movement within a clearly defined constituent community. The most infamous example is the use by the al-Qaeda affiliated Abu Hafs al-Masri Brigrade of semi-professionally produced videos and posters lionizing the young men who have chosen to become suicide bombers. Sacrifice of their own fighters, who are drawn from the local communities, helps to galvanize community support while also deflecting whatever backlash might occur among their constituents when civilians are targeted in attacks, Hoffman and McCormick contend.

Finally, building off of recent work by Hafez (2006) on the use of suicide terrorism by groups in Iraq, groups that are more likely to engage in suicide attacks might lack a short or intermediate-term expectation that they will play a formal role in political life. Unlike groups that strive towards national liberation or seek domestic regime change, groups with universalist or abstract goals are not inhibited by the need to demonstrate to their constituents that they are a functional replacement for the political status quo.

Analysis

My analysis tests these hypotheses by fitting six logistical regression models using a database of 4,660 incidents of terrorism, both suicide and non-suicide attacks, from 1998 to 2005 inclusive.

The Data

The database was built by the principal investigator and two research assistants using data obtained from

the RAND®-MIPT Terrorism Incident database (1998 to present).[6] The database includes both international and domestic terrorist attacks. The unit of analysis is the individual terrorist attack and is coded by date and year. The dependent variable is coded dichotomously for whether or not the terrorist attack was a suicide attack, defined as an attack in which the perpetrator purposely died during the execution attack. In the database, 321 attacks are coded as suicide attacks comprising 6.8% of all incidents in the data.

Variables

The study uses 14 independent and control variables, all of which are summarized in Appendix 1 of the Web Appendices. *Target Democracy* is a dummy variable coded "1" for incidents where the victim or victims are nationals of a democratic state, and I use it to test my first hypothesis. To address the controversy that accompanies defining a regime as a democracy or a nondemocracy—recall that Bloom (2004a) is critical of Pape's (2003, 2005) classification of states such as Russia and Sri Lanka as democracies—I consider democratic states to be those rated as "free" or "partially free" by the nonprofit organization Freedom House in analysis.[7] The decision to code *Target Democracy* using the nationality of the actual victims rather than the location of the attack is most appropriate because it permits a more sophisticated examination of terrorist activity—especially given the more complex, globalized nature of national populations. Though in the overwhelming majority of incidents (around 90%), the target of the attack was a national of the country where the attack took place, operationalizing *Target Democracy* based on the nationality of the victim captures incidents where the perpetrator seeks to strike a blow against an enemy state or society by attacking a national of that society that is abroad. In the case that the victims are nationals of multiple states, I merely use an unweighted average of the index numbers (1 through 7) of the Freedom House political rights index and then convert the result into a dichotomous variable, coding a "1" for averages that are between 1 and 5 ("free" to "partially free"). My assumption is that *Target Democracy* will not be a significant predictor of suicide terrorism.

Terrorist From Democracy is coded "1" for incidents when the terrorist perpetrator or perpetrators hail from a state classified as "free" by Freedom House. Notice that I use the more selective classification of democracy for this variable, in contrast to the more lenient one (both "free" and "partially free") for *Target Democracy* above. It is justified to use a more conservative operationalization for this variable because it is breaking new research grounds and is a first cut at empirically examining the effects of structural conditions on the production of terrorist groups. I also use a weighted average for incidents with perpetrators of multiple nationalities in the manner described previously. This variable enables me to test my second hypothesis, and my expectation is that it will be a significant negative predictor of suicide terrorism.

I test my third hypothesis using three variables: *Occupation Issue* is a dummy-variable coded "1" for incidents occurring in the context of a military

[6]The decision to use examine the years 1998 to 2005 is data driven. It would be optimal to have a larger time-horizon over which to analyze attacks to increase the total number of observations. However, the RAND®-MIPT database is the most appropriate source of data for this study for two reasons: First, it is critical to consider both international and domestic terrorist events in empirical studies of terrorism. Hoffman and Hoffman (1995: 180) and LaFree and Dugan (2004, 2) note that international or transnational terrorism account for only 5 to 10% of total terrorist events world-wide, while Abadie (2004, 1–4) and Gurr (1998, 174) note that studies that exclude domestic terrorist events introduce a second type of selection bias and are necessarily limited in terms of the conclusions that may be drawn from results. Second, other available databases suffer from critical limitations. Databases such as ITERATE (International Attributes of Terrorist Events) and the Rand Corporation Database on international attacks have longer time-horizons but include data only on international attacks. The PGIS database (Pinkerton Global Intelligence Service) includes data on both domestic and international events but has been plagued by missing events and unsystematic coding and is missing date for the entire year of 1993 due to administrative mismanagement, calling into question its reliability. (LaFree and Dugan 2004, 2; LaFree et al. 2006) The U.S. State Department's *Patterns of Global Terrorism* database is marred by yet more serious limitations related to its limited definition of terrorism, missing data, and problems of political manipulation and bias (Dugan, LaFree, and Fogg 2006). In contrast, the MIPT-RAND database has been described by Hoffman and Hoffman (1995, 178) as the leading database for quantitative studies of terrorism.

[7]The Freedom House index has been criticized by scholars because it is not a perfectly consistent measure throughout the available time-series (1973 to 2005): it is adjusted by a one-half point mid-series. My decision to use Freedom House index, nonetheless, rather than the Polity IV database, is because Polity IV runs only until 2003. My decision to convert Freedom House from an ordinal variable to a dichotomous one hopefully corrects for any operationalization inaccuracies. However, duplicate models using the raw, interval measure of Freedom House do not yield different results. Furthermore, models that code Target Democracy more restrictively—only those states rated as "free"—also do not yield significantly different results. The results of all supplementary models are available from the author upon request.

occupation involving 10,000 troops or more.[8] *Target Democracy* and *Occupation Issue* are also interacted to test the hypothesis that suicide terrorism is the product of occupation by democratic states. Finally, *Religious Difference* is coded "1" for incidents in which the attacker and the victim are of different religions. My expectations are that while *Occupation Issue* will be a significant predictor of suicide terrorism, the interaction term will not. I also expect *Religious Difference* to be a significant, positive predictor of suicide terrorism.

Three dummy variables are used to operationalize the ultimate political objectives that define the terrorist groups perpetrating the attacks and to text my fourth hypothesis. The first is *National Self Determination Goal* which is coded as a "1" for groups whose objective is to secure a separate national homeland for their constituent population, to secede and to join an already existing state with whom the terrorist group and its constituents identify as national confederates or to secure greater cultural and/or political autonomy from the dominant ethnic group of the country in which they reside. Examples of such groups include the Kurdistan Workers Party (PKK) of Turkey, the Liberation Tigers of Tamil Elaam (LTTE) of Sri Lanka, and the Irish Republican Army. The second is *Domestic Political Goal* which is coded as a "1" for groups whose objective is to secure outright regime change or substantial policy change by the current regime under which they and their constituent population live that would result in a redistribution of political power. Examples of groups falling under this category would be the Revolutionary Armed Forces of Colombia (FARC), the Gama'a Islamiya of Egypt or the Communist Party of Nepal. The third is *Universalist / Abstract Political Goal* which is coded "1" for groups who have political objectives, exceeding or outside of national self-determination and domestic political change, that are derived from broad, ideological critiques of contemporary politics and society and that include large-scale, global revolutions in thought, political order, economic organization, and social practice. A distinguishing feature of these sorts of groups is the ambitious, abstract and sometimes nebulous nature of their agendas, for example worldwide replacement of the capitalist economic system, an end to United States hegemony, an end to global consumer culture, a dismantling of industrial society, an overthrow of established, bureaucratic government in favor of individual or community self government, rejection of the secular nation-state and reconfiguration of the Islamic World into a caliphate, an end to the global enslavement of animals. Examples of these sorts of groups include the al-Qaeda network, the Earth Liberation Front in the United States and the United Kingdom or the innumerable anarchist groups in Western Europe.

These three categories of terrorist group political objectives are designed to be mutually exclusive and collectively exhaustive: groups cannot be classified into more than one type and no group is unclassified. Scholars consider terrorism to be a necessarily political phenomenon, and so it is possible to ascertain the political orientation and objective of any terrorist group and sort it into one of these three rather broad classifications. However, the classifications are meaningful and distinctive. Though two groups might both be radical Islamist groups that are both motivated by an extremist ideology and are engaged in a struggle against a non-Muslim occupation force, for example the Palestinian Hamas and the al-Qaeda Organization in the Land of the Two Rivers (al-Qaeda in Iraq), they have can have sharply different political objectives, organizational structures and patterns of activity and can therefore be clearly sorted into two separate categories. While Hamas functions as a national-liberation movement with a finite objective, the creation of an independent Palestinian state governed under Islamic law, al-Qaeda in Iraq seeks the overthrow of all Muslim governments and unification of the entire Muslim world into a postnation-state political unit governed under a highly puritanical Sunni Islam. Hamas is a fully Palestinian movement that limits its activities to attacks on Israel and expresses no more than a rhetorical affinity for Muslims and their struggles other parts of the world while al-Qaeda in Iraq, formerly led by Jordanian terrorist Abu Musab al-Zarqawi, is multinational in membership and commits attacks in multiple countries, regarding itself as a global movement against the political status quo in the Muslim world (See Gunaratna 2002; Levitt 2004; Mishal and Sela 2000; U.S. Congressional Research Service 2005). One could not fairly classify Hamas as a universalist/abstract-type group, and one cannot fail to classify al-Qaeda in Iraq as otherwise.

A complete list of all terrorist groups analyzed in the study along with how they are classified in term of

[8]Incidents coded as having an occupation issue comprise 38% of total observations in the dataset (1,784 out of 4,694). The occupations in the dataset include: Afghanistan (by NATO forces since 2001); Chechnya (by Russian forces); Iraq (by U.S. and other coalition forces since March 2003); Kashmir (by Indian forces); Kosovo, Former Yugoslavia (by NATO forces); Lebanon (by Syrian forces until April 2004); Northern Ireland (by British troops); the Palestinian Occupied Territories (by Israel); and the Turkish Kurdish regions (by Turkish troops since 2003).

political objective and descriptive statistics on groups, incidents and suicide terrorism rates can be found in Appendix 2 and 3 of the Web Appendices. My assumptions are that *Universal/Abstract Political Goal* will be a significant positive predictor of suicide terrorism, while *National Self Determination* will either be a weaker predictor in comparison or will not be significant. I expect *Domestic Political Goal* to either be an insignificant or a negative predictor of suicide terrorism.

Finally, I include several control variables. *GDP per-capita* measures the size of the national economy in constant purchasing power parity of the country of which the terrorist perpetrator is a national, while *Literacy* measures the national literacy rate of the country of which the perpetrator is a national. Scholars are sharply divided on the relationship between poverty and suicide terrorism. While Gunaratna (2004) notes that suicide attacks are common in conflicts featuring underdeveloped political economies, and Pedhazur, Perliger, and Weinburg (2003) note that Palestinian suicide bombers disproportionately tend to come from lower socioeconomic parts of the West Bank and Gaza, Merari (2004) could not find a discernible socioeconomic pattern among Palestinian suicide bombers. Krueger and Maleckova's (2003) survey research actually found that Palestinian suicide attackers tended to be from wealthier families and had higher levels of education. I, therefore, have no expectations about both of these variables.

State-Sponsored is a dummy variable coded "1" for incidents perpetrated by terrorist groups reported to be financially or otherwise assisted by states. It is reasonable to expect that given the controversy surrounding suicide terrorism as a tactic, and given that we can assume that states are more sensitive to the national and international public opinion fallout than nonstate actors are, one might expect state-sponsored terrorist groups to be less likely to use suicide terrorism. I expect *State-Sponsored* to be a negative predictor of suicide terrorism.

Number of Competing Groups is an interval-level variable which measures the degree of competition posed by rival group to the terrorist group perpetrating the incident. It is operationalized by counting the number of groups that share the same constituent population. Bloom (2004b) observed that the Popular Front for the Liberation of Palestine (PFLP) began to use suicide attacks once it noted the rise in popularity Hamas obtained when it engaged in suicide terrorism. A similar phenomenon was noted by Kramer (1991) in the context of rivalry between the Amal militia and Hezbollah in Southern Lebanon in the 1980s. I expect *Number of Competing Groups* to be a significant, positive predictor of suicide terrorism.

I also control for whether or not the perpetrating group is a radical Islamist group with the dummy variable *Islamist*. A significant number of studies argue that terrorist groups that have a radical Islamist ideological orientation are more likely to engage in suicide terrorist attacks (Atran 2004; Berman and Laitin 2006; Crenshaw 2002; Pedhazur, Weinberg, and Perliger 2003; Victor 2003). This is little more than an observation for most of these studies, but Crenshaw (2002) explains that suicide attacks are more common in cultures that value martyrdom or promise eternal salvation in exchange for personal sacrifice to protect religion. However, Pape (2003, 2005) and Bloom (2004a) note that much of the suicide terrorist activity in the 1980s and 1990s was launched by secular, non-Islamist groups such as the Kurdish Workers Party (PKK) in Turkey or the Liberation Tigers of Tamil Elaam in Sri Lanka. Moreover, a significant number of Islamist groups do not engage in suicide terrorism. I do not expect *Islamist* to be a significant predictor of suicide terrorism.

Finally, I add a dummy-variable to control for whether or not the terrorist attack observed occurred in Iraq. I argue that this it is crucial to control for this because the number of suicide, and nonsuicide, terrorist attacks in Iraq after the 2003 United States invasion are quite large compared to the rest of dataset. Iraq is a potential outlier and could distort any possible relationships observed. I run one model without the country dummy *Iraq* to demonstrate the effects of terrorist attacks in Iraq on the other independent variables.

Results

The results of the models are displayed in Table 1, and the core findings are as follows. First, I find no empirical support for the thesis that suicide terrorism is prompted by occupation by democratic states or that democracies are particularly ripe targets for suicide attacks. Occupation is a significant predictor of suicide terrorism across the board, but it is unrelated to the regime type of the occupying power. Second, democracies are significantly less likely to produce terrorists who go on to commit suicide attacks. Third, groups classified as having universal or abstract political goals are much more likely to use suicide attacks, while groups classified as having domestic political goals are significantly less likely to

TABLE 1 Predictors of Suicide Terrorist Attacks, 1998–2005

	1 B (*SE*)	2 B (*SE*)	3 B (*SE*)	4 B (*SE*)	5 B (*SE*)	6 B (*SE*)
Target Democracy	−1.294 (.842)*	−.461 (.270)	−.017 (.393)	−.477 (.272)	−.366 (.266)	−.481 (.272)
Occupation Issue	.914 (.256)*	.850 (.265)*	1.457 (.449)*	.915 (.285)*	.586 (.260)*	1.137 (.263)*
Target Democracy * Occupation Issue			−.878 (.509)			
Terrorist From Democracy	−4.988 (.842)*	−4.886 (.877)*	−4.623 (.861)*	−4.911 (.881)*	−4.647 (.831)*	−4.442 (.831)*
Religious Difference	.983 (.194)*	1.347 (.211)*	1.449 (.219)*	1.382 (.219)*	1.031 (.215)*	1.172 (.208)*
National Self Determination Goal				−.141 (.218)		
Domestic Political Goal					−.959 (.228)*	
Universal / Abstract Political Goal						1.633 (.276)*
GDP per-capita	.000 (.000)*	.000 (.000)*	.000 (.000)*	.000 (.000)*	.000 (.000)*	.000 (.000)*
Literacy Rate	.024 (.006)*	.014 (.007)*	.014 (.007)*	.015 (.007)*	.006 (.007)	.017 (.007)*
State-Sponsored	−.239 (.205)	−.165 (.206)	−.089 (.213)	−.153 (.208)	−.184 (.202)	−.014 (.206)
Number of Competing Groups	.018 (.005)*	−.002 (.007)	−.001 (.007)	−.002 (.007)	−.004 (.007)	−.008 (.006)
Islamist	.171 (.191)	.085 (.194)	.048 (.197)	.076 (.195)	.036 (.190)	−.190 (.196)
Iraq		2.154 (.389)*	1.903 (.405)*	2.165 (.391)*	2.150 (.379)*	2.430 (.382)*
Constant	−5.346 (.477)*	−5.003 (.488)*	−5.353 (.549)*	−5.086 (.508)*	−3.680 (.562)*	−5.153 (.501)*
n	4660	4660	4660	4660	4660	4660
Pseudo r^2	.279	.297	.298	.297	.306	.313

All coefficients unstandardized B coefficients, standard errors in parentheses, *indicates significance at the .05 level

engage in suicide terrorism. Groups that are motivated by nationalist, separatist, or national self-determination goals are neither more nor less likely to use suicide terrorism. Furthermore, predicted probabilities for the seven independent variables of interest support the relative importance of supply-side predictors of suicide terrorism, the results of which are reported in Appendix 4 of the web appendices.

In model one, *Target Democracy* is indeed a significant predictor of suicide terrorist attacks; however it is negative indicating that democracies are significantly less likely to be targeted by suicide attackers. In model 2 however, I control for whether or not the attack occurred in Iraq, a country that has seen an inordinately large number of suicide terror attacks, the lion's share of which have been perpetrated against Iraqi citizens (especially Iraqi security forces and government agents) and so are therefore rated in the analysis as attacks against citizens of a state rated by Freedom House as "not free." Here it is evident that Iraq is indeed an outlier and once controlled for—as is the case in models 2 through 6—the significant relationship between *Target Democracy* and suicide terrorist attacks vanishes. My explanation for this (null) result lies in the research design of the study: it corrects for selection bias issues that are present in previous studies. Democracies are more likely to be the targets of all manifestations of terrorism. When suicide and nonsuicide attacks are pooled, as is the case in this study, the regime type of the target is not a feature that significantly distinguishes suicide terrorism from nonsuicide terrorism. However, across all six models, *Terrorist From Democracy* is a significant, negative, and consistent predictor of suicide attacks. This supports the hypothesis that democracies are substantially less likely to *produce* suicide terrorists than are nondemocracies, even if they are no more likely to be targeted by them. Occupation is a significant, positive predictor of suicide attacks in all six of the models. This is a partial vindication of the Pape hypothesis, but when *Target Democracy* and *Occupation Issue* are interacted in model 3, no significant relationship is evident. The variable *Religious Difference* is a significant, positive predictor of suicide terrorism across all six models, demonstrating the importance of (a key type of) "otherness" in the strategic decision of terrorist groups to engage in suicide attacks. Also, when comparing descriptive statistics of those observations where occupation is an issue with all observations in the data set, important differences can be discerned.

The variables measuring the political goals of the terrorist groups in the study also produce interesting findings: *National Self-Determination Goal* is not a significant predictor at all, while, as expected, *Domestic Political Goal* is significant and negative. *Universal/Abstract Political Goal* is highly significant and a positive predictor of suicide terrorism. Tests of predicted probabilities, furthermore, demonstrate the relative importance of *Universal/Abstract Political Goal* among the other predictors of suicide terrorism modeled. Groups characterized by these sorts of objectives—abstract, highly ideological, universalistic, and difficult to achieve with immediate or concise policy changes—are much more prone to engage in suicide terrorist activity.

Addressing the controls, *GDP per-capita* is a significant, positive predictor of suicide terrorism across all six models. This contradicts the notion that suicide terrorism is a product of poor levels of economic development and, combined with the consistent findings that *Literacy Rate* is a significant and positive predictor of suicide attacks, is in line with findings by Krueger and Maleckova (2003). Terrorist groups using suicide attacks often select better educated and more affluent individuals for suicide missions among their pools of volunteers because they are more reliable and competent. These results could demonstrate the tactical decisions made by terrorist groups plotting and executing suicide attacks. State-sponsorship is not significant, as expected, and whether or not the group in question is an Islamist movement is also not significant. Interestingly, contrary to the expectations derived from Bloom's (2004b) study, *Number of Competing Groups* is also not significant as a predictor once Iraq is controlled for as an outlying case. Intergroup competition does not seem to be a precipitant of suicide terrorism.

Conclusion

Of course these results are preliminary, but they have implications for both the scholarly treatment of suicide terrorism and, potentially, for antiterrorism policy itself. The causal model of suicide terrorism accepted by Pape and others regards all terrorist groups to be uniformly rational, meaning they have coherent objectives, and strategic-minded, meaning they opt to act in ways that most efficiently allows them to achieve their objectives. As such, terrorist groups choose to launch suicide attacks against democratic occupiers, because these sorts of attacks are most likely to yield beneficial results for the terrorists. This study recasts this conventional wisdom. Many terrorist groups are, indeed, rational and strategic-minded actors, and this explains why

democracies are more frequently targeted by all types of attacks. However, suicide attacks are employed in relatively specific and rare instances—when perpetrators are faced with a foreign, occupying target that their constituents are not likely to pity—and are employed by a specific subset of groups: the so-called abstract/universal type. These types of perpetrators are, arguably, less rational and strategic, and this is made evident when one attempts to describe their long-term political objectives and who they regard as their constituents. The extended policy implication of this conclusion is stark, once you consider that suicide terrorism is much more lethal than nonsuicide terrorism: there is utility in distinguishing between different types of terrorist groups when prioritizing counterterrorism resources, and attempts to seek political accommodation with terrorist groups are not likely to reduce the most deadly of attacks.

Furthermore, the study uncovers what has been curiously understudied by terrorism scholars: the general political environment of the country of origin of terrorist perpetrators. Suicide terrorists are substantially more likely to hail from nondemocratic countries, and this result holds up even when controlling for whether the attack occurred in Iraq. This is a lucrative avenue for future research, and perhaps indicates that suicide terrorism is affected by the types of opportunities for political participation afforded to would-be terrorists. It also has implications for the validity of democracy-promotion as an antiterrorism tool. Though there is no evidence that democracies produce fewer terrorists,[9] they perhaps produce fewer suicide terrorists.

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[9]Published and unpublished research by Piazza (2006, 2007) indicates that transnational terrorist attacks are not more likely to be perpetrated by groups based in nondemocratic regimes and perpetrators of terrorist attacks are not more likely to be nationals of nondemocratic countries.

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